

BRIC-60

Biological Research in Canisters (BRIC)-60

The Biological Research in Canisters (BRIC) is an anodized-aluminum cylinder used to provide passive stowage for investigations evaluating the effects of space flight on small organisms. Specimens flown in the BRIC 60 mm petri dish (BRIC-60) hardware include *Lycopersicon esculentum* (tomato), *Arabidopsis thaliana* (thale cress), *Glycine max* (soybean) seedlings, *Physarum polycephalum* (slime mold) cells, *Pothetria dispar* (gypsy moth) eggs and *Ceratodon purpureus* (moss).

The BRIC-60 unit requires no operational power and consists of both an upper and lower chamber (Fig. 1). Two optional configurations are available with capabilities of flying as a half canister (lower chamber + chamber lid) or full canister (upper chamber + lower chamber + chamber lid). The BRIC-60 can hold a maximum of twelve 60 mm petri dishes per half canister (a total of twenty-four per full canister) or thirteen Teflon tubes per half canister (a total of twenty-six per full canister) (Fig. 2). Up to eight full canisters or 20 single chamber canisters can be flown in an International Space Station (ISS) stowage locker configuration (Fig. 3).

Four pressure relief vents in each chamber lid adhere to the rapid depressurization requirements for space flight. These specialized vents make a series of unique convoluted turns maintaining a light-tight environment inside the canister chamber. The total weight of the BRIC-60 is 0.9 lbs., and the physical dimensions are 15.9 cm (height) x 8.2 cm (outside diameter). The BRIC-60 modified (BRIC-60M) includes 2 gas sampling ports capable of drawing gas from two axial heights within the sealed canister (Fig. 1).

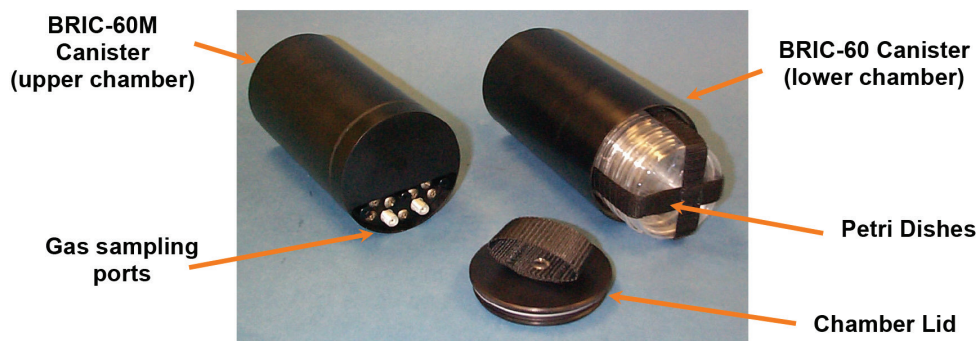


Fig. 1 BRIC-60 and BRIC-60M with petri dish configuration.

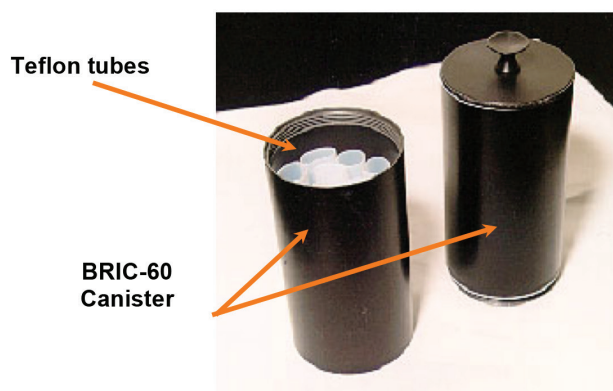


Fig. 2 BRIC-60 containing Teflon sample tubes.



Fig. 3 BRIC-60 Canisters as flown in an ISS stowage locker.

